

**What is Claimed is:**

1. A pivot shaft structure for a scissor mechanism which includes two bars crossly and pivotally engaged through the pivot shaft structure, the pivot shaft structure comprising:
  - 5 a pivot shaft vertically mounted to one of the bars in a protrusive manner having at least a turning contour and a constraint contour, the turning contour being a portion of an shaft contour of a pseudo turning shaft and having a scope exceeding a semicircular scope of the pseudo turning shaft, the constraint contour forming a turning  
10 central angle relative to the corresponding pseudo turning shaft; and
  - a receiving hole located on another bar having an hole contour matching the pivot shaft, the hole contour including at least a matching  
15 turning contour and a matching constraint contour, the matching turning contour being a portion of an hole contour of a pseudo turning shaft opening and having a scope exceeding a semicircular scope of the pseudo turning shaft opening, the matching constraint contour forming a matching turning central angle relative to the corresponding pseudo turning shaft opening;
  - 20 wherein the pseudo turning shaft and the pseudo turning shaft opening are rotary matching and have a common axis, the matching turning central angle being smaller than the corresponding turning central angle, the pivot shaft structure being turnable through matching the turning contour to the corresponding matching turning contour and forming a  
25 turning limitation through contact of the constraint contour with the corresponding matching constraint contour, the smallest variation angle between the matching turning central angle and the corresponding turning central angle being the changeable turning angle of the scissor mechanism.
- 30 2. The pivot shaft structure of claim 1, wherein the variation angle is ranged from 15 degrees to 165 degrees.

3. The pivot shaft structure of claim 1, wherein the constraint contour is formed by removing another portion of the pseudo turning shaft,
4. The pivot shaft structure of claim 3, wherein the constraint contour is a contour formed by flatly removing another portion of the pseudo turning shaft.
5. The pivot shaft structure of claim 1, wherein the matching constraint contour is formed by filling another portion of the pseudo turning shaft opening,
6. The pivot shaft structure of claim 5, wherein the matching constraint contour is formed by flatly filling another portion of the pseudo turning shaft opening.
7. The pivot shaft structure of claim 1, wherein the pivot shaft has two symmetrical turning contours which are symmetrical about a diameter of the pseudo turning shaft.
8. The pivot shaft structure of claim 5, wherein the receiving hole has two matching turning contours which are symmetrical about a diameter of the pseudo turning shaft opening.
9. The pivot shaft structure of claim 1, wherein the pivot shaft is extended in two sections, one section forming the turning contour, another section forming the constraint contour, and the receiving hole also being formed to match the pivot shaft.

10.A keyswitch assembly comprising:

a key cap having a lower surface provided with first guiding parts;

a base plate having an upper surface disposed below the key cap and provided with second guiding parts positioned to correspond to the first guiding parts; and

a key support coupled to the first guiding parts and the second guiding parts for supporting the key cap performing vertical movement with respect to the base plate, the key support comprising:

a first bar;

a second bar, pivotally engaged with the first bar;

a receiving hole formed on the first bar;

a protrusion formed within the receiving hole; and

a pivot shaft formed on the second bar, the pivot shaft having a slot formed thereon, the slot dimensioned to make the protrusion slidably received within the slot;

wherein when the pivot shaft inserted into the receiving hole, the protrusion slidably received within the slot, so that the first bar able to perform a rotation relative to the second bar, and the rotation being less than a predetermined angle limited by the engagement of the protrusion and the slot.

11. The keyswitch assembly of claim 10, wherein said predetermined angle is ranged from 15 degrees to 165 degrees.

12. The keyswitch assembly of claim 10, wherein said slot is formed by removing a portion of said pivot shaft.